



## Ausferritic Ductile Iron

### What is Ausferritic Ductile Iron?

This describes a range of ductile irons with small amounts of nickel, copper or molybdenum added that can be austempered to give hard wear resistant ductile irons.

### History

- Austempering first applied to ductile iron in 1972.
- Euronorm standard introduced in 1997.
- World wide production exceeded 100,000 tonnes by 1998.

### Terminology

Ausferritic ductile iron, ausferritic spheroidal cast iron, austempered ductile iron and ADI all refer to the same range of ductile irons.

### Properties

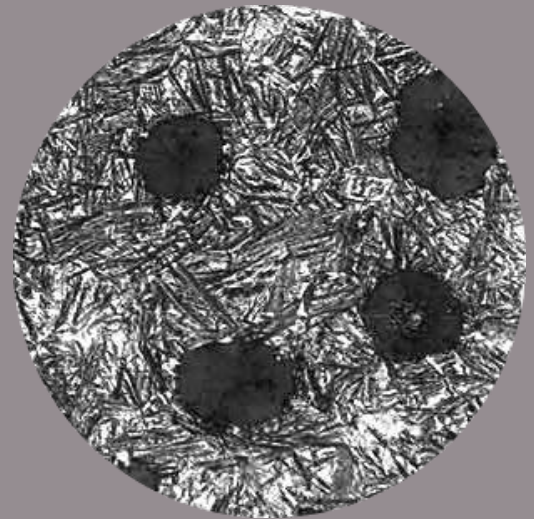
- High wear resistance.
- High toughness.
- High strength to weight ratio.
- Some grades work harden.
- Low thermal expansion. Good thermal shock resistance.
- Tougher to machine than normal ductile iron especially after heat treatment.
- Good cold toughness and resistance to erosion.
- Can be cheaper than an equivalent manganese steel casting.

### Uses

- Mining and quarrying.
- Trenching equipment.
- Ball, hammer and rod mills.
- Waste compaction and shredding.
- Coal chutes.
- Abrasive liquid and slurry pumps.
- Sand pipes and bends.
- High performance brake discs.
- Digger teeth.

### Material Standards

- BS EN 1564 and BS ISO 17804
- Equivalent DIN, ASTM, SAE and other national standards.



If you need to order a casting in ausferritic ductile iron and are confused by its description or it has a specification you don't recognise on a drawing, please contact us as there is a good chance we will recognise it. If we don't, we have access to a world wide database that should enable us to identify the material and offer the equivalent grade within BS ISO 17804.